The Digest

Prepared by the Press Service for the use of USDA employees. Views and opinions in these items are not necessarily approved by the Department of Agriculture.

Washington, D.C., November 2, 1942

PROTEIN POOR DIETS - POOR ECONOMY. (The National Provisioner, October 24) "Protein-poor diets are poor economy," says McCall's Magazine. In a November feature by a nutrition specialist, the magazine warns its readers that a reduction in meat intake necessitates making up for the dietary lack with other proteins. Milk, cheese, eggs, poultry, fish, are particularly recommended. The average person, it is explained, needs an ounce of protein for each 62 lbs. of weight. Protein foods, however, are not pure protein, except for egg white. To illustrate the relative protein value of various foods, "McCall's" points out that it would take one cup less than three quarts of milk to provide the protein in a pound of beef; 14 eggs, or 3/4 lb. of cheese, are also protein-equivalent to a pound. Three-quarters of a pound of beef would provide the full day's protein for an adult.

FIBRE CASES. (Poultry Tribune, November) Wooden egg cases continue in short supply. Fewer new cases are being made by the mills. The demand for wooden cases to use in cold storage was greater than usual last spring and summer, and due to the demand by drying plants, fewer Midwest eggs are being shipped East and, therefore, fewer used cases are available for use by eastern poultrymen. There is no need for poultrymen to do without cases, however. For many years, fibreboard cases have been used very satisfactorily by numerous other poultrymen. At the present time, several carton and box manufacturers are making fibreboard cases in various sizes, principally 15 dozen and the standard 30 dozen. The cost of fibreboard cases is similar to that of new wooden cases, and, with reasonable care, they will stand up well under repeated useage.

HIGH-PROTEIN FLOUR. (Business Week, October 24) To offset the meat shortage this year's bumper crops of oilseeds offer means of overcoming any deficiency of proteins in the national diet. Soy flour--also peanut flour and cottonseed flour--will do the trick if the public supports the Agriculture Department's plan to enlist the cooperation of food processors in adding these flours to bread, sausage meat (frankfurter type), macaroni, cereals, and corn meal. Soy flour and peanut flour are high in easily digested proteins, minerals and vitamins. Geographically the crops are right from a transportation standpoint, soybeans being a northern crop and peanuts a southern crop. The flours are a byproduct of the manufacture of oil by the expeller mill, hydraulic press, or solvent processes. Soybeans are cracked, steamed and dried, dehulled, and then the germ is removed. High fat soybean flour is made from the split bean meats while low fat flour is made from the cake after the oil has been removed from the bean meats.

FOREST RESOURCES. (Scientific American, October) The inroads that have been made by war into the timber capital of most European countries will inevitably result in a reduced forest productivity for a long period after the war, according to C. L. Forsling, assistant chief of the Forest Service. Following the war, he said, there is likely to be a heavy demand for lumber and other forest products for reconstruction purposes and to meet the normal needs that have been postponed during the war.

PARAFFINE SHORTAGE - A PROBLEM. (Food Industries, October) Paraffine that once was so plentiful is now another item on the list of shortages, and its scarcity will soon create problems for the food manufacturer. The difficulty is not that the production is less but that demand is so great. Munitions industries are getting increasingly large percentages of the available supply. Non-food companies, like paint and varnish makers, have already been cut substantially. Chewing gum manufacturers are not allowed any at all. But makers of tents and other canvas military items have been getting huge amounts of paraffine waxes and oils. The biggest food industry use for paraffine wax is for waterproofing packages and wrapping materials, also for conferring a marked resistance to moisture-vapor transfer. It begins to look as if 1943 will see the paraffine wax problem in an acute stage. Statistically, there will be about 600,000,000 to 700,000,000 lb. available to supply a demand that may run as high as 900,000,000 lb.

FOOD CROPS AND WAR OUTPUT DEPEND ON PERSONALITY AND HABITS OF FARMER. (Science Service, Oct.) The habits and personality of a farmer affect the nation's food supply as much as soil and climate. The failure to rotate crops, for instance, which has ruined much of our soil, may be the result of ignorance, prejudice, or inability to learn. The same personal factor enters into war production, where the worker's output is often determined by how well he gets along with his foreman or the boss, rather than by his wages, food, or working conditions. In studying the human elements in any of these practical problems, the social scientist must first learn to examine himself more honestly to find out how far his own habits and prejudices are "blind spots," affecting his results.

NEW RASPBERRY. (Farm Research, October) The Milton red raspberry is a new variety resulting from breeding work at the N.Y. state Agricultural Experiment station. Milton is being introduced this fall by the New York State Fruit Testing Association, which at present is the only source of plants. Milton originated from a cross between Lloyd George and Newburgh which was made in 1927. The plants of Milton are vigorous, sucker freely, and appear to bear as good crops as other standard varieties, but comparative yield records have not yet been taken. The canes are sturdy and need no support to bear the crop. Winter injury of the canes has been slight at Geneva and not serious in the Hudson Valley test planting.

NEW DAIRY BY-PRODUCT. (The North American Veterinarian, October) An important new byproduct of the dairy industry is "Aralac." This is a translucent cloth made from the casein which is extracted from skim milk. The fiber can be blended with wool, mohair, cotton, rayon or fur in varying amounts and is being used extensively in the manufacture of felt hats.

PERMANENT WAVES AND MILK. (Southern Dairy Products Journal, October) Milk long has been used for many diverse purposes--but it has now entered a new field of service --permanent waves. In New York, the Park Avenue Salon of Primrose House is advertising a Milk-fed permanent wave, claiming that the milk solution gives the hair a healthy tone and leaves the waves soft and beautiful.

1943 FARM MACHINERY PROGRAM. (War Letter for Agriculture, October 26) Extra good care and widest possible use of existing farm machinery and equipment is emphasized by WPB order restricting 1943 manufacture of new farm machinery and equipment to 20 percent of average production in 1940 and 1941. Production of repair parts will be at 130 percent of average output in 1940 and 1941. Production of new farm machinery and equipment in 1942 averaged about 83 percent, while repair parts were at 150 percent of 1940 production. Manufacturers are classified into large, medium, and small producers on the basis of net sales in 1941: Class A--producers whose sales totaled more than 10 million dollars in 1941; Class B--producers whose total sales were between $750,000 and 10 million dollars; Class C--producers whose sales were below $750,000. Repair parts, tractors, tractor-mounted implements, combines, harness hardware and hand tools are exempt from the concentration order.

MORE SPACE FOR POULTRY. (The North American Veterinarian, October) A new hazard to be considered by the poultry industry is the increase in mortality which accompanies the overcrowding of poultry. Plans for accelerated egg and poultry production call for more chickens, but no mention is made of increasing housing space. It is generally considered that 4 square feet (a 24-inch square) of floor space must be allowed for one bird. Last year, this space was cut to 3.2 square feet (a 21-inch square). Under the new production goal, 145 chickens will be housed where 100 were formerly kept and each bird will be allotted a 19-inch square of space. An increased number of birds housed in overcrowded conditions will not provide an increase in egg production.

BAIL-OUT RATION DEVELOPED. (Food Industries, October) Enough nourishment to satisfy a soldier's hunger for at least a day has been packed into a new "featherweight" package and is known as the "bail-out ration. Intended specifically for Army fliers, it was developed by the Quartermaster Corps subsistence experts. The complete ration, weighing about 8¼ oz., fits easily into the soldier's pocket. It contains a vitamized chocolate bar, a box of malted milk dextrose tablets, a carton of dextrose tablet, a tube of boullion powder and a stick of chewing gum. The package for the bail-out ration is the same as that for the K-ration, being specially treated heavy wax paper that is proof against grease, dirt, moisture and gas.

MORE GUAYULE PRODUCED. (Pathfinder, October 24) Senator Downey of California told the Senate that the yield of guayule seed--130,000 pounds --had been eight times the original expectation and he estimated the stock on hand enough to seed 207,000 acres. The guayule rubber harvest of 1944 has been estimated at 33,000 tons.

HARVESTING FOREST PRODUCTS. (Pathfinder, October 17) So great is the demand and so many are the needs for wood that wood has become a critical material, and a definite scarcity has developed. Lumber requirements for the current year have been estimated at 39 billion board feet, as compared with the average production of 25 billion for the 1936-40 period. Most is for war use; only 16 billion feet going to civilians, which represents a reduction of one third over what they got in 1941. Fuelwood requirements are estimated at 75,000,000 cords--which represents an increase of 15 percent above the average. That much wood is equal in fuel value to a million carloads of coal. Many are the uses for wood in the vast war program. For boxing and crating of supplies for the armed forces, Lend-Lease and other shipments 8 billion board feet are required. Wood has been substituted for steel in sub chasers, mine sweepers, and torpedo boats; veneer and plywood have replaced light metals in aircraft; wood and paper boxes have been substituted for burlap bags. Wood is also required for ship timbers, gunstocks, mine-props, cooperage stock and tannin extract, for which bark is also used.

MEAT BY AIR. (Business Week, October 3) Bolivians are experimenting with airplane shipments of fresh meat from the country's lush lowlands on the eastern side of the Andes to the commercial centers of La Paz and Potosi high in the mountains. First shipments arrived safely a few weeks ago, and the meat sold at reasonable levels even though the merchants carrying out the experiment reported a good profit.

BUNA S TIRES TO GIVE 90% OF WEAR OF NATURAL RUBBER. (Wall Street Journal, Oct. 9) Motorists can expect their Buna S synthetic rubber tires--when they eventually get them--to have 90 percent of the wearing qualities of natural rubber. Buna S, foundation of the huge synthetic program, is "particularly well adapted as a material for tires," the Baruch Rubber Survey Committee reports. Besides its 90% wearability, compared with crude rubber it is "apparently satisfactory" for inner tubes, and is also to play a part in the recapping program. "With suitable compounding, successful tires in sizes up to 7.00 can be made entirely out of Buna S," the committee reports. "In the larger truck, heavy duty and combat sizes a certain amount of natural rubber has thus been found necessary in the sidewalls and carcasses of the tires." However, in the committee's opinion not more than 20% by weight of a heavy Buna S tire would have to be crude rubber and the tire industry, the committee said believes that this percentage may be reduced to 10, perhaps lower. The committee stated that Neoprene was the synthetic "most nearly similar in its general utility to natural rubber," although it is about one-third heavier. Its wearing qualities are about 25% greater than crude rubber under severe service and about 10% under crude rubber for ordinary driving.

DRIED FOOD. (Science Digest, October) Foods deprived of water are classified as "dried," "sun-dried," "evaporated" and "dehydrated." The first term implies the removal of water by any means; the second implies removal without artificial heat. In both evaporation and dehydration artificial heat is necessary. Evaporation depends on natural draft; dehydration on forced circulation of artificial heat. Dehydration is the most complicated of all drying processes because temperature, humidity and circulation must be controlled. It is not a business that can be started on a shoe-string basis. A productive capacity of 500,000 pounds a year is the minimum for profitable operation.

- - - - - - -

The Digest

Prepared by the Press Service for the use of USDA employees. Views and opinions in these items are not necessarily approved by the Department of Agriculture.

Washington, D.C., November 9, 1942

CROPS MAKING GOOD GROWTH. (Weekly Weather and Crop Bulletin, Nov. 4) Recent rains will be helpful in the Ohio Valley States where many late seeded grain fields needed moisture for germination and to make sufficient growth to establish a good root system for winter. In parts of the Northeast a third week in succession with widespread rain has further delayed late seedling, but the early crop is making good growth. In the western main Winter Wheat Belt the outlook continues bright. Also, rains of the week in the Pacific Northwest were highly favorable, although in some places they came too late for seeding, which had been delayed because of dry weather. In the Southeast the soil continues too dry, but in most Gulf States recent rains will be helpful for winter grains.

ALARMING MEAT SHORTAGE. (Washington Post, Nov. 4) A meat shortage of alarming proportions has developed in Canada during the past six months, despite the fact that there are as many cattle in the country as there ever were and probably twice as many hogs. Since the fall of Denmark, the greater part of Canadian pork production has been going to Britain. Of last year's record production of 838 million pounds, only 282 million pounds were consumed in Canada. This year Canadian farmers are being urged to put forth still greater effort so that 700 million pounds of "bacon for Britain" can be exported. There won't be much bacon left for Canadian breakfast tables.

3-CENT SOUP MIXTURE. (Science Service, October 20) Latest addition to large-scale, low cost, high nourishment feeding is a three-cent soup mix announced the Massachusetts Institute of Technology. Made of skim milk powder, peanut flour, soya flour and peas, the soup mixture is inherently rich in good protein and in vitamins of the B complex. It will be possible to supplement it with minerals and with natural and synthetic vitamins so that each ounce can supply the full day's allowance of these diet essentials. A full day's portion can be supplied at a cost of two to three cents.

FARMS IDLE IN KANSAS. (Western Tobacco Journal, October 6) The Kansas delegation in Congress told Secretary of Agriculture Claude Wickard that 900 farms in Kansas were entirely idle in 1942 and that 10,202 would be idle next year if the farm labor shortage continued. The statement was signed by Senators Arthur Capper and Clyde M. Reed (Republicans) and seven members of the House. It further said that 5,000 farms were partly idle in 1942. The Kansas labor shortage is due 52.2% to selective service and 35.2% to higher wages and shorter hours in industry, the delegation said.

SULFA DRUG AND HENS. (Science Digest, November) Sulfanilamide has been used to treat pneumonia in fowls, but sometimes, in spite of proper diet, hens began to lay soft-shelled eggs, and never recovered the ability to lay hard-shelled ones.

WE HAVE THE MOST MEAT. (Victory, October 27) Two and a half pounds a week, permitted each adult under U. S. Government's program of voluntary meat sharing, makes American diet relatively a feast. Compared to our 40 ounces, shares of our friends and foes overseas range from England's 31 downward to Italy's 6 and captive Belgium's maximum of 4.9.

COCKROACHES KILLED BY TOUCH OF POISON. (Science Service, October 23) An insect poison that kills cockroaches if it touches the outside of their bodies, though they can swallow it without harm, is described by Iowa State College. The compound is phenothiazine, which has been under test for some time as a promising fungicide and killer of parasitic worms as well as an insecticide. When it touches the outside of the cockroach's shell, phenothiazine passes through and is apparently converted into another compound, known as a conjugate of thionol, which really does the killing job. Size of the particles of phenothiazine seems to have much to do with its fatal effect. The finer the particles, the smaller the size of the deadly dose needed.

FIRST "MILK LADY" HIRED. (Dairy Record, October 28) Miss Amy Hatfield, 18, is the first "milk lady" to be hired in the Philadelphia market. She was hired in response to an advertisement appealing for women milk wagon drivers. Hiring women for this work is considered an experiment. The women are being placed on day routes and may have the choice of trucks or horse-drawn wagons. Miss Hatfield says she prefers a wagon. The milk ladies will be given a two weeks' training period before going on the routes. They will wear special working attire designed by a local fashion stylist.

SURPLUS FOOD USED AS FUEL. (Scientific American, October) Successful conversion of steam-generating equipment in Argentine power plants now permits the burning of surplus vegetable fuels for power. Use of shelled and cob corn, barley, bran, sorghum, seedcake, and sunflower seed husks, almost completely takes the place of imported coal and oil supplies now cut off by the war. Shelled corn is burned on traveling-grate stokers, while bran is fed to forced-draft burners at the rear of the stokers. A single large boiler at the summer seaside resort of Mar del Plata fires pulverized barley or bran. Corn on the cob, as well as sunflower-seed husks and shelled corn are burned at the Tablada station in Cordoba. Other plants at Tucuman, Mendoza, and Chivilcoy have been converted in a similar manner to utilize substitute fuels.

PLYWOOD SHOE SOLES. (Hide and Leather and Shoes, October 24) Plywood shoe soles, said to be as soft and pliable as leather and composition, are being developed in the state of Maine and the inventor of the process claims that the finished product is fully as comfortable as leather and the wearing qualities are much better. The soles are shaped from regulat quarter inch plywood, then they are impregnated with a chemical which makes them soft and waterproof. The wood will be turned out at the plywood factory but the shaping will be done at another plant. Present plans call for this latter work to be done at a shoe factory.

PERMANENT WAVES AND MILK. (Southern Dairy Products Journal, October) Milk long has been used for many diverse purposes--but it has now entered a new field of service --permanent waves. In New York, the Park Avenue Salon of Primrose House is advertising a Milk-fed permanent wave, claiming that the milk solution gives the hair a healthy tone and leaves the waves soft and beautiful.

1943 FARM MACHINERY PROGRAM. (War Letter for Agriculture, October 26) Extra good care and widest possible use of existing farm machinery and equipment is emphasized by WPB order restricting 1943 manufacture of new farm machinery and equipment to 20 percent of average production in 1940 and 1941. Production of repair parts will be at 130 percent of average output in 1940 and 1941. Production of new farm machinery and equipment in 1942 averaged about 83 percent, while repair parts were at 150 percent of 1940 production. Manufacturers are classified into large, medium, and small producers on the basis of net sales in 1941: Class A--producers whose sales totaled more than 10 million dollars in 1941; Class B--producers whose total sales were between $750,000 and 10 million dollars; Class C--producers whose sales were below $750,000. Repair parts, tractors, tractor-mounted implements, combines, harness hardware and hand tools are exempt from the concentration order.

MORE SPACE FOR POULTRY. (The North American Veterinarian, October) A new hazard to be considered by the poultry industry is the increase in mortality which accompanies the overcrowding of poultry. Plans for accelerated egg and poultry production call for more chickens, but no mention is made of increasing housing space. It is generally considered that 4 square feet (a 24-inch square) of floor space must be allowed for one bird. Last year, this space was cut to 3.2 square feet (a 21-inch square). Under the new production goal, 145 chickens will be housed where 100 were formerly kept and each bird will be allotted a 19-inch square of space. An increased number of birds housed in overcrowded conditions will not provide an increase in egg production.

BAIL-OUT RATION DEVELOPED. (Food Industries, October) Enough nourishment to satisfy a soldier's hunger for at least a day has been packed into a new "featherweight" package and is known as the "bail-out ration. Intended specifically for Army fliers, it was developed by the Quartermaster Corps subsistence experts. The complete ration, weighing about 8½ oz., fits easily into the soldier's pocket. It contains a vitamized chocolate bar, a box of malted milk dextrose tablets, a carton of dextrose tablet, a tube of boullion powder and a stick of chewing gum. The package for the bail-out ration is the same as that for the K-ration, being specially treated heavy wax paper that is proof against grease, dirt, moisture and gas.

MORE GUAYULE PRODUCED. (Pathfinder, October 24) Senator Downey of California told the Senate that the yield of guayule seed--130,000 pounds --had been eight times the original expectation and he estimated the stock on hand enough to seed 207,000 acres. The guayule rubber harvest of 1944 has been estimated at 33,000 tons.

HARVESTING FOREST PRODUCTS. (Pathfinder, October 17) So great is the demand and so many are the needs for wood that wood has become a critical material, and a definite scarcity has developed. Lumber requirements for the current year have been estimated at 39 billion board feet, as compared with the average production of 25 billion for the 1936-40 period. Most is for war use; only 16 billion feet going to civilians, which represents a reduction of one third over what they got in 1941. Fuelwood requirements are estimated at 75,000,000 cords--which represents an increase of 15 percent above the average. That much wood is equal in fuel value to a million carloads of coal. Many are the uses for wood in the vast war program. For boxing and crating of supplies for the armed forces, Lend-Lease and other shipments 8 billion board feet are required. Wood has been substituted for steel in sub chasers, mine sweepers, and torpedo boats; veneer and plywood have replaced light metals in aircraft; wood and paper boxes have been substituted for burlap bags. Wood is also required for ship timbers, gunstocks, mine-props, cooperage stock and tannin extract, for which bark is also used.

MEAT BY AIR. (Business Week, October 3) Bolivians are experimenting with airplane shipments of fresh meat from the country's lush lowlands on the eastern side of the Andes to the commercial centers of La Paz and Potosi high in the mountains. First shipments arrived safely a few weeks ago, and the meat sold at reasonable levels even though the merchants carrying out the experiment reported a good profit.

BUNA S TIRES TO GIVE 90% OF WEAR OF NATURAL RUBBER. (Wall Street Journal, Oct. 9) Motorists can expect their Buna S synthetic rubber tires--when they eventually get them--to have 90 percent of the wearing qualities of natural rubber. Buna S, foundation of the huge synthetic program, is "particularly well adapted as a material for tires," the Baruch Rubber Survey Committee reports. Besides its 90% wearability, compared with crude rubber it is "apparently satisfactory" for inner tubes, and is also to play a part in the recapping program. "With suitable compounding, successful tires in sizes up to 7.00 can be made entirely out of Buna S," the committee reports. "In the larger truck, heavy duty and combat sizes a certain amount of natural rubber has thus been found necessary in the sidewalls and carcasses of the tires." However, in the committee's opinion not more than 20% by weight of a heavy Buna S tire would have to be crude rubber and the tire industry, the committee said believes that this percentage may be reduced to 10, perhaps lower. The committee stated that Neoprene was the synthetic "most nearly similar in its general utility to natural rubber," although it is about one-third heavier. Its wearing qualities are about 25% greater than crude rubber under severe service and about 10% under crude rubber for ordinary driving.

DRIED FOOD. (Science Digest, October) Foods deprived of water are classified as "dried," "sun-dried," "evaporated" and "dehydrated." The first term implies the removal of water by any means; the second implies removal without artificial heat. In both evaporation and dehydration artificial heat is necessary. Evaporation depends on natural draft; dehydration on forced circulation of artificial heat. Dehydration is the most complicated of all drying processes because temperature, humidity and circulation must be controlled. It is not a business that can be started on a shoe-string basis. A productive capacity of 500,000 pounds a year is the minimum for profitable operation.

- - - - - - -

The Digest

Prepared by the Press Service for the use of USDA employees. Views and opinions in these items are not necessarily approved by the Department of Agriculture.

Washington, D. C., November 16, 1942

WEEKLY WEATHER AND CROP BULLETIN. (U.S.D.C., November 11, 1942) Recent rains have brought changes for the better in the soil moisture situation over considerable areas, during the week ending Nov. 11, but otherwise little change has occurred since the beginning of the month. In the middle Atlantic area where October was extremely wet, fair weather, with only light rain, has been favorable. On the other hand, substantial falls in the Ohio, and the upper and extreme lower Mississippi Valleys, where October was decidedly dry, have improved the situation. This is true also in the north Pacific area. On the other hand, dryness in the Southeast is still unrelieved with rain needed rather generally in a considerable area. In Florida, where October had only a little more than one-fourth of normal rainfall, November so far has continued very dry and the situation is becoming critical. In west Gulf sections winter vegetables are making normal growth. In the Rocky Mountain area, warmth and dryness were favorable, but in the northern Plains cold, cloudy weather retarded outside seasonal operations. Also farm work was delayed considerably by frequent rainfall in south-central sections of the country.

MELONS FOR CHRISTMAS. (The Michigan Farmer, November 7) Arthur Van Lue, of Wabash County, Ind., makes a practice of having melons for Christmas day, along with the customary holiday turkey and goose. Just before freezing weather, he picks his last watermelons and packs them in the oats in his granary. This guards them against freezing and rotting so that the melons usually keep until after New Year's. Melons picked when beginning to ripen will continue to do so in the bin. Another method used to keep melons in winter is to cover the melon and stem with varnish to exclude moisture and air and then place it in a place where it will not freeze.

MEATLESS TUESDAY IN CALIFORNIA. (Butchers' Advocate, November 4) Governor Olson of California has called upon the people of his state to observe meatless Tuesday, beginning this week . . . Liver, heart, kidneys and sweetbreads will be the only meats served in homes and restaurants on Tuesdays if the Governor's plan of voluntary meatless Tuesdays for the duration is complied with.

HOGCHUTE IS LABOR SAVER. (I. A. A. Record, November) In these days of searching for labor-saving devices, William Arndt, Illinois farmer, has demonstrated the practical use of a homemade hog-catching chute. While living in Whiteside county, Arndt noted the use of a cow stanchion as a hog-catching chute and when he moved to Henry county he decided to adapt the idea to his own work. He improved on the cow stanchion by elevating the floor of the chute so that the hog would have to back uphill to get away from the catching stanchion. He made the chute from old pieces of lumber about the farm and finished the job in two hours. The crate is two feet wide and six feet long. Two men can move it very easily to any place on the farm.

SPECIAL MACHINES HELP ISSUE WAR BONDS. (Wall Street Journal, Oct. 9) Mass production techniques are being adopted by banks and the accounting and finance divisions of many large corporations in the Detroit area to speed issuance of War Savings Bonds which hundreds of thousands of war workers are purchasing weekly under the payroll deduction plan. It is to ease the worst headache from war bond sales--the lag in issuing them after they've been paid for--that the banks and corporations are turning to the most modern machinery available. Quick delivery improves morale and stimulates additional purchases---says corporation and bank officials. Delays ranging from two to four weeks often result from use of the old manual method of filling in necessary information with typewriters and rubber stamps, they say. While the bulk of War Savings Bonds is being issued by the corporations it is notable that a great many companies are turning over this job to the banks. The National Bank of Detroit, which has issued more bonds than any other bank in the U.S., started out with a charge to its customers of 9 cents for processing each bond to be mailed to the purchaser and 7½ cents for each bond to be delivered back to the corporation in bulk for delivery with pay checks. This bank is now processing about 7,000 bonds a day and has just installed additional fast equipment which increases capacity to about 12,000. This equipment has permitted lowering the charge to 6½ cents and 5 cents respectively.

NEW ERA OF SHOE MAKING. (Hide and Leather and Shoes, October 31) Monday morning, Nov. 2, the curtain rises at Chicago on a new era of shoe-making, shoe styling, and shoe merchandising. Two days before the opening of the National Shoe Fair at the Palmer House and Morrison and Sherman Hotels, the War Production Board officially took control of many of the normal business habits of the industry. From that time on, shoe manufacturers are limited in their choice and use of colors, in their selections of materials, and in their creations of new fashions. The shoe industry has gone to war!

FOOD FOR SOLDIERS. (Science Digest, October) A man in uniform needs about 306 pounds of meat a year, contrasted with 172 pounds for a civilian. An 8,000,000-man Army thus would require 2,448,000,000 pounds of pork, beef and lamb a year. In addition, Lend-Lease orders are expected to take as much as 3,000,000,000 pounds. Together they amount to more than a fourth of this country's estimated meat production for this year. Prospects are, therefore, that civilians must eat less meat. Canned goods also are wanted in huge quantities. The entire 1942 pack of salmon, sardines and other fish already has been ordered by the Army. In addition, WPB has approved Army orders for all the canned apples, beets and carrots, for more than half the spinach, 40 percent of the pears, and more than a third of the pack of asparagus, beans, corn, peas and tomatoes. These orders indicate that the housewife is going to prepare more of her own vegetables in the kitchen, that Americans may not get their accustomed 40 cans of food a year because each soldier requires 80 cans.

1943 WILL BE REAL TEST. (N. Key Hart) With a record production in 1942 assured and a great victory on the farm front won, the U.S. Department of Agriculture is shaping plans to help farmers hold production at high levels in 1943. Detailed goals for next year are now being calculated and will be ready shortly. The job of working out the goals is harder than it was last year because the situation has changed. Weather this year was almost ideal; next year's weather is an unknown. Mild handicaps this season will doubtless grow more aggravated in 1943. Fewer sons and hired men will be left to help older men with the farm work; fertilizers will be less plentiful; new machinery will be rationed; more tires and farm equipment will wear out. It will be necessary, in 1943, to use our resources in such manner that every acre of land and every lick of work will produce maximum results. We needed tremendous quantities of food and other farm products this year to keep our fighting forces and civilians plentifully supplied, with enough in addition to send large quantities to our allies. Next year we must have even greater quantities for these needs as the war rolls on to its climax. Goals must take these increased needs into consideration. Reserve supplies of some crops will help, but for most crops a continued high level of production will be imperative.

BANANAS ARE AVAILABLE. (Food Industries, October) With fresh bananas on the luxury list, the dried ripe bananas brought out by a New York firm have a ready market. The product is manufactured at the firm's modern dehydration plant in Puerto Cortes, Honduras. Naturally ripened, the bananas are processed at the peak of ripeness, and packaged in 1-lb. lots in a cellophane wrap. From the nutrition angle, the product retains all mineral values of the fresh fruit,--calcium, iron, copper and phosphorous. Only the moisture is removed. Each pound of dried bananas contains between 15 and 18 whole bananas, and retails at a price below the current price of fresh bananas.

SOLDIERS IN MALTA RECEIVE FIRST POWDERED MILK. (Southern Dairy Products Journal, October) The first shipment of powdered whole milk sent abroad by the AMA is helping to sustain allied soldiers fighting for freedom at Malta. Enough powdered whole milk was delivered in June to supply that garrison with more than 2¼ million quarts of milk—a vital food that means better health and steadier nerves for people bombed relentlessly. To "make" a quart of milk that tastes very much like pasteurized milk and has approximately the same food value, all they need to do is to add 4½ ounces of the powdered whole milk to a quart of water.

(Dairy Record, October)

OKLAHOMA FACES MILK, BEEF-RATIONING./ Transportation bottlenecks are threatening Oklahoma with rationing of dairy, poultry and beef products. Because of tire rationing and a shortage of labor many small dairies are selling cows for meat animals, State and national farm officials are endeavoring to halt the practice. Requirements of the Army and Navy have heavily taxed the milk and butter supply of Muskogee, Pryor and Norman, Scott stated. Oklahoma City and Tulsa producers, he commented, were "operating at 100 percent capacity," with no surplus.

MEAT BY AIR. (Business Week, October 3) Bolivians are experimenting with airplane shipments of fresh meat from the country's lush lowlands on the eastern side of the Andes to the commercial centers of La Paz and Potosi high in the mountains. First shipments arrived safely a few weeks ago, and the meat sold at reasonable levels even though the merchants carrying out the experiment reported a good profit.

MIXERS IN PAPER. (Business Week, October 10) Metal for packaging specialty food items may be lacking, but a Los Angeles firm has solved the problem of how to wrap wet and dry foods together in one package. The dry food goes in the bottom, and on top there is a wax compartment holding the liquids that, when added to the dehydrated contents, restore the missing essences, needed--as the company explains--"to give the product a finishing touch in both aroma and flavor." Each package makes a pint of mushroom sauce, twice as much as consumers formerly received in the company's 8-oz. can.

RABBIT PELTS INTO HATS. (Pathfinder, November 7) Hats are of felt; felt is made from rabbit pelts, and the hat-makers are running out of rabbit pelts and wondering what to do about it. The Fish and Wildlife Service and the War Production Board have come to the rescue with a call to American farmers and hunters to go out for a little rabbit skin--but preferably for the skins of the big jack-rabbits of the West. American hunters and trappers never before found rabbit skins worth bothering with. Supplies for hatters and furriers (cony to them) came from Australia and certain European countries, and that fur was longer and whiter and better suited to their purpose.

ORANGES FOR VICTORY. (Science Service, Oct. 22) "Oranges For Victory" might be adopted as a new slogan by citrus fruit growers and nutritionists after reading the eight military uses of vitamin C including treatment of T.N.T. poisoning reported by Oberlin College. Vitamin C, or ascorbic acid, of course, is found in many other fruits and vegetables besides oranges, and is also made synthetically. Latest military use for ascorbic acid is in treatment of T.N.T. poisoning. Tests have convinced authorities that T.N.T. destroys vitamin C and 57 cases of severe poisoning have been treated with rapid response to treatment. Poisoning due to tetryl used as booster charge in shells is now causing medical concern and daily doses of the vitamin should be given. The zinc oxide fume given off when brass is melted is causing symptoms somewhat reminiscent of lead poisoning which suggests that vitamin C in the workers' bodies is being destroyed. Value of vitamin C in preventing heat prostration, to which soldiers in the tropics and North Africa as well as war industry workers are exposed, has already been reported. Shock from injury and surgical operations, allergic shock as in hay fever patients; and benzene and toluene poisoning are other military and war industry conditions that might be effectively warded off by vitamin C.

UTILIZE WATER CARRIERS. (The National Provisioner, October 24) Declaring that "everything possible must be done to prepare for the increased load which is coming upon the railroads," Joseph B. Eastman, director of the Office of Defense Transportation, recently urged shippers and all government agencies to utilize water carriers where possible. Mr. Eastman said that the railroads are carrying a freight traffic load which is running about 30 percent ahead of 1941 as measured by ton-miles.

- - - - - - -

The Digest

Prepared by the Press Service for the use of USDA employees. Views and opinions in these items are not necessarily approved by the Department of Agriculture.

Washington, D.C., November 23, 1942

FALL WEATHER. (Weekly Weather and Crop Bulletin, November 18) Aside from some unseasonably cold and disagreeable conditions during part of the week (ending Nov. 17) in the central and north Atlantic areas, and heavy rain in central and north Pacific sections, the week brought almost ideal weather for seasonal operations on farms. Mostly good progress is reported in late harvests and other operations, except where delayed by labor shortage. The weather again was favorable in permitting farmers to accomplish maximum amounts of work with a minimum of help. Over a considerable northeastern area low temperatures retarded growth of grass and fall-grain crops, and there was some damage by frosts to tender vegetation in southern localities, but this was not extensive as most crops had matured. In the Central Valleys warmth and sunshine promoted growth of crops, while the cessation of rains permitted more active outside operations on farms. In the Southeastern States rainfall was again absent and moisture is still needed rather generally from North Carolina southward and southwestward to Mississippi, with droughty conditions becoming increasingly serious in some localities, especially Florida. Moisture is needed also in southern California and the southern Great Basin, including Arizona, but in central and northern California warm weather and adequate moisture promoted good growth of grass and all fall crops.

FARM MACHINERY. (Wallace's Farmer and Iowa Homestead, November 14) How long will corn belt farm machinery keep going with only 20 percent production of new machines and 130 percent production of repair parts? Iowa State College has made a survey of Iowa farms to check the age and condition of different kinds of farm machinery. The report shows that 6 percent of Iowa's tractors are due for replacement this year and 11 percent within three years. This estimate is based on a life span of 13.5 years for the average tractor. With an average life of almost twelve years, six out of every hundred corn pickers in Iowa would normally be replaced this year. And almost 25 percent of the pickers on farms of less than 220 acres will be nearing the wornout stage in three years.

VITAMINS CAUSE COLOR LOSS. (Science Digest, October) Vitamin lack can cause color loss in feathers just as it causes color loss in hair, experiments at the University of California indicate. The two researchers placed a number of black Minorca chicks on a vitamin-free diet, supplementing it with varying doses of the necessary vitamins, except that to one group they gave no pantothenic acid, and to another only a minimum amount of this member of the vitamin B complex. The no-pantothenic chicks developed colorless, often distorted feathers, while those with inadequate doses of the vitamin had colored feathers with a rather "washed-out" appearance.

MIXED VEGETABLES POPULAR. (Ice and Refrigeration, Nov) Mixed vegetables, introduced experimentally during the past few months, have won such favor with consumers that they are now being distributed nationally. Mixed vegetables are packed in Hillsboro, Oregon, and contain five of the finest vegetables grown in the Pacific Northwest, cut corn, lima beans, carrots, green beans and green peas. The product is finding special favor among small families that like more than one vegetable but find it impractical to prepare complete servings of several of these important nutrition foods. In addition, consumers questioned after their use of the product declare that it provided an important saving of time over cleaning and preparing different vegetables with different cooking times. It is excellent for salads, as a vegetable, and in special dishes.

ANSWERS ABOUT MEAT. (Victory, November 3) Q. Does the Share-the-Meat program call for 2½ pounds weekly of each kind of meat or of all meats? A. All beef, veal, pork, lamb, mutton taken from the dressed carcass. Q. Can one buy a large amount of meat from farmers and keep it? A. Yes, but they are expected to limit themselves to their fair weekly share of 2½ pounds. Q. Are those who raise their own meat supply also expected to "Share the Meat"? A. Yes. Q. What are the regulations in regard to eating meat at restaurants? A. Restaurant menus will indicate the weight of the meat portion served and the patron will accordingly deduct this from his weekly allowance. Q. Will chicken be shared under the 2½ pound allowance? A. No. Q. Will fish be shared under the 2½ pound allowance? A. No. Q. Does the 2½ pound allotment include luncheon meats? A. Yes. Q. Are coupons going to be used? A. Not at present. When ration books have been printed and distributed and meat placed on a rationing basis, coupons will be used. Q. How is the amount purchased now going to be controlled? A. On a purely voluntary and patriotic basis. Q. Will families consisting of only two adults be able to buy large sized roasts? A. Yes, but if its weight is 5 pounds or more they will not be able to eat any other kind of meat during the week. Q. How much will invalids get? A. Whatever the doctor has prescribed, whether the amount is above or below 2½ pounds weekly. Q. Does the 2½ pounds include fats and bones? A. Yes.

ACCIDENTS KILL OR INJURE MILLIONS. (Pathfinder, November 14) Figures given out on Oct. 28 showed 4,453 sailors and marines, and 1,016 soldiers, killed since Pearl Harbor. On the same day the number of war production workers killed since Pearl Harbor was put at 42,000. The figures were given by Dr. Victor G. Heiser, medical consultant to the National Association of Manufacturers' committee on healthful working conditions, speaking at Boston. Including the less serious accidents Dr. Heiser said records show 11,000 war workers killed or injured on and off the job every day since December 7, 1941. That figures out to the astounding total of 3,575,000 war workers who have suffered death or injury.

MILK BRICKS. (Science Digest, October) Milk bricks are the latest development in the way of scientific and industrial research. Water is evaporated from the milk and the resulting powder is molded into a firm block under high pressure. Thirty-three pounds of powder can be compressed into a 9 inch cube, equivalent to 26 gallons of milk.

(Hide and Leather and Shoes, Nov.)

SHOES FOR FARM WOMEN./ Farm women want shoes which help do the job, as well as insure their health. These needed shoes will fall into two classes. First, the shoe for general wear which may be used as a walking shoe by any woman, clerk, teacher, homemaker. This shoe will follow the fashions of the day by having lower heels. A straight inner line, sufficient draft for the thickness of the toes, and length for the foot itself (at least 1/2 inch longer when standing) will make for more foot comfort. A snug heel and close-fitting instep are additional considerations. The second shoe needed for active farm labor should have sturdy qualities. The general points in shape and fitting will be the same as for the walking shoe. Heavier uppers as well as soles are features in this more rugged shoe. The weight of this shoe may detract from its comfort unless it is built to fasten above the ankle as some "girl scout" shoes, thus helping to swing the weight away from the instep. With these shoes, farm women will be more able to make their contribution to winning the war.

TEA FROM PERSIMMON LEAVES? (Science Service, Nov. 5) When tea joins coffee on the list of scarcities, don't worry. Brew yourself a tasty cup from persimmon leaves -- if you live where persimmons grow. It's good for you; full of scurvy-preventing vitamin C. Green persimmon leaves are rich in this essential vitamin. Freshly dried leaves sometimes have an even higher concentration. Green fruits also contain the vitamin, though not as much of it as the leaves; the vitamin apparently disappears to a large extent as the fruit ripens. Tea made from chopped-up dried leaves was found to be a good vitamin source, and tasted rather well with a little sugar -- "similar to sassafras tea." Real tea was also tested, but proved to have only about one percent as much vitamin C as the decoction from persimmon leaves.

NO METALS FOR FOOD LOCKER. (Business Week, October 3) Those representatives of the National Frozen Food Locker Assn. who fought it out all summer in Washington in defense of their industry were dealt a hard blow recently. The Foods Requirements Committee designated locker plants as relatively unimportant in today's national food picture. That was hard enough to take, but what really hurt the food locker people was FRC's ruling that no more metals would be allocated for new locker plants. Instead of haughtily setting forth that theirs was actually a very large industry (4,500 locker plants serving approximately 1,350,000 patrons with individual leased lockers), spokesmen tactfully resorted to the "yes-but" technique. "Yes," they agreed, "we are a small industry, but that's just the point. Give us the equipment to grow with and we will, to a considerable degree, ease the shortages on metals, foodstuff and transportation." Result: The locker plant case is to be reconsidered by FRC.

MILK CANS TO BE LIGHTER THINNER. (National Butter and Cheese Journal, November) America's farms and dairies will make available almost 18,000 tons of steel for war production in the next 12 months by getting along with simpler and fewer milk cans, as a result of an order issued October 2, by the War Production Board.

"CROP REPORT" FROM EUROPE. (American Miller, November) Nearest thing to a crop report from Europe last month was PM's outline of grain scarcity in Axis nations, cabled from London by Correspondent Frederick Kuh: "The Axis outlook for grain supplies from southeastern Europe is growing worse," he said, "and the Nazis are looking increasingly to the conquered Soviet regions for food." From the Balkans during the 1941-42 crop year, Germany and Italy drained 1,000,000 tons of grain. In the 1942-43 crop year, 300,000 tons is the maximum which can be expected from this source, even though the expertness of fascist parasitism remains unquestioned. The Rumanian drouth has cut current corn crop prospects to 3,500,000 tons. Likewise, the wheat crop is short to the point of deficit. Rumania, notes Kuh, needs some 6,000,000 tons of wheat and corn for home consumption, whereas the year's harvests barely exceed 5,000,000 tons. (Up to 8,000,000 tons was Rumania's normal prewar volume.) Concluded Kuh: "Rumania promised to deliver 500,000 tons of grain to Germany, but it now looks as though Germany can whistle for it." As to the rest of southeastern Europe, even in normal times a "deficit" grain zone, Greece is disastrously deficient. In Bulgaria, Serbia and Croatia there will be no surpluses for Germany, partly because of adverse weather factors and, (in the case of the Serbs and Croats) because of seething political unrest. Secretive is the word for Hungary's crop reporters. Acreage is below par--as is crop condition. Germany's Marshall Goering in October boasted that much of the food for Nazi armies was coming from Russia, and his reiteration that Germans in Germany would be the last to starve, was believable. Press dispatches from Istanbul last month noted that Turkish lobsters and caviar were being picked up weekly by special planes dispatched by Goering.

CORK FROM FIR TREES. (Business Week, November 7) Experiments in production of highgrade cork from bark of Douglas fir trees of the Pacific Northwest have reached a point where researchers are willing to guarantee that Washington state alone has a potential annual output of 100,000 tons. Oregon forests should be able to add about an equal amount. Cork from Douglas fir bark has been discussed for several years, and experiments have been conducted sporadically in various laboratories, but the low prices on cork from Mediterranean countries have discouraged researchers from working out a complete process. With imports shut off by war, they got down to business about a year ago at the instigation of the Washington State Planning Council.

CANNERS ASKED TO MARK CONTENTS. (Journal Commerce, November 10) The War Production board is asking food canners to mark on the cans the contents of each can, at the request of the armed services. Military operations often involve handling supplies under difficult conditions. Frequently cans containing food become wet and lose their labels, with the result that it is impossible to tell what the unlabeled cans obtain. It is suggested that cans be marked in any of the following ways: 1. Embossing product name or a five-letter abbreviation on covers. 2. Printing product name or five-letter abbreviation on body or end of cans using a permanent non-corrosive ink. 3. Lithographing product name on body or ends of cans. 4. Printing, stenciling, etc., by hand with a permanent non-corrosive ink.

- - - - - - -

The Digest

Prepared by the Press Service for the use of USDA employees. Views and opinions in these items are not necessarily approved by the Department of Agriculture.

Washington, D. C., November 30, 1942

LIMIT MEETINGS DURING XMAS HOLIDAY. (From Secretary Wickard's Memo) In order to ease the very heavy load of passenger travel on common carriers during the holiday season, the Director of Defense Transportation has requested all government agencies to "limit, as far as is possible without impairing the war effort, the calling of meetings which would involve travel . . . . . during the period from December 18 through January 10." All agencies of the Department are instructed to comply with this request.

CEILING PRICES ON FARM SOLD TURKEYS (From OPA press release) Farmers and processors will use a separate method of determining their maximum prices on live and dressed turkeys which they sell at retail to consumers other than commercial, governmental or institutional users, the Office of Price Administration announced today. On all such direct sales, the ceiling is the highest permitted retail selling price prevailing in the nearest city, town or hamlet to the seller's farm or plant. On mail order sales to consumers, the seller may add to this price the actual mailing, express or shipping cost to the address of the buyer.

NO MORE WHIPPING CREAM. (From OWI Press Release) The War Production Board today prohibited dairy producers from distributing whipping cream, or other heavy cream, to household consumers, retailers, restaurants, institutions, and others. Coffee cream is not affected. The order will help relieve the most critical butter shortage in ten years and local fluid milk shortages in most sections of the country. Cream containing more than 19 percent milk fat is used for whipping and other purposes. Sometimes such cream contains as much as 40 percent milk fat. The order applies to any dairy producer who pasteurizes milk or cream; produces dairy products, for sale, by processing milk or cream in a plant not located on a farm where the milk is produced; bottles raw or pasteurized cream in glass or paper containers; or sells cream in bulk containers to hotels, institutions, or restaurants. However, a farmer, ranch, or herd owner may deliver up to four quarts of heavy cream per day, if his deliveries of cream containing more than 19 percent milk fat averaged less than one gallon daily in the three months ended November 25, 1942. If his deliveries exceed four quarts daily in any calendar month, he automatically becomes subject to the same restrictions as other producers. The order will save the equivalent of approximately 2 billion pounds of fluid milk annually. Production of approximately 200 million pounds of heavy cream a year will be discontinued.

WEATHER FOR WEEK ENDING NOV. 24. The week was characterized by widespread precipitation and abnormally high temperatures over large areas. In the middle and north Atlantic States, where last week was decidedly cool, there was a reaction to much warmer weather, with the weekly mean temperatures decidedly above normal, except in the extreme Northeast where about-normal warmth prevailed. Over the central and northern Great Plains the weather was somewhat cooler than for last week, though temperatures again averaged considerably above normal.

GERMAN NUTRITION BETTER THAN IN 1916. (Science Service, October) Germany will not face the food difficulties this winter, in all probability, that she did during the later years of the first world war. Food reserves in the Reich are reported as still sizable, though lower than last year. In contrast to the last war, Germany's farm-production and marketing system is much more efficiently operated. But labor shortage, especially since the Russian campaign, has become an increasingly acute problem. The most recent information reported that 800,000 war prisoners had been put to work. Nearly 2,000,000 foreigners, in all, are now thought to be working on German farms. Despite the much tighter labor-supply situation, there seems to be no indication of the extreme labor shortage that was evident in 1916. Principal nutritional aims of the Nazis are to maintain high production of bread grains and sugar beets, and expand production of oil-bearing plants, vegetables, potatoes and fodder crops. Some meat preparations, like pork sausage, are no longer made wholly or even predominately of meat. Sausages are now made of a small amount of pork mixed with a large quantity of soybean meal and sometimes cereals. However, the high-protein soybeans are nearly a complete substitute for meat, many nutritionists have pointed out, so this is not as bad as it may seem.

GUAVA - VITAMIN C KING. (Florida Grower, November) The lowly guava, which might be described as "the poor man's fruit" over peninsular Florida during the summer and early fall, has risen to the highest health standing among the products of sub-tropical farm and grove as the result of recent research showing it to be outstanding, in the fresh state, for its vitamin C content.

FROZEN VEGETABLES FOR THE ARMY. (Ice and Refrigeration, November) Uncle Sam has adopted a new policy of buying quick frozen vegetables for his army and this is saving hundreds of tons of tin and steel for war production and giving his men in the armed forces better food. This announcement was made by the Fourth Service Command, headquarters, Atlanta, and will mean that henceforth American forces will be served fresh vegetables and fruits the year round, the quick freezing retaining practically all of the caloric and vitamin content found in freshly picked fruits and vegetables.

TASTE TEST. (Food Industries, November) Newcomers in the business of preservation of food by dehydration must learn many a step that is commonplace routine among those who have been in business for years. One of these is the daily testing of products by tasting. This is on the must list of every food manufacturer with experience. It should be instituted by every newcomer just as soon as he gets his plant into operation. Daily tests of yesterday's production should be compared with stored samples held for three and six months. If you do not know what your product tastes like, freshly made and after several months of storage, you are depriving yourself of vital information. To leave the taste verdict to buyers is equivalent to a restaurant owner going out to eat. Start those daily tasting tests now, keep them going as long as you are in business. And keep a record of the results. If perchance you don't like the taste of your own foods, there is nobody but yourself to apply the remedy--well, nobody but the sheriff.

MORE TIRES - BUT NOT ENOUGH FOR "DRIVING AS USUAL." (OPA Daily Bulletin, November 18) To a group of Mid-West congressmen conferring with OPA on behalf of traveling salesmen, whose mileage is restricted under the new mileage rationing regulations, John R. Richards, chief of OPA gasoline rationing branch, said: "While there will be more tires available, there will not be enough for driving as usual. If we limit the driving of any one group, it is done so that farmers can transport produce to market and bring supplies back to their farms; so that farm workers can drive from one job to another; so that industrial workers can get to war plants."

U.S. WANTS MORE FROZEN FOODS, (Food Industries, November) Large quantities of frozen foods are being consumed by the Army, and the government is taking steps which may lead to expansion of the capacity of the freezing industry. Purchases of frozen foods for the armed forces have been at the rate of 600,000 lb. of fruits and vegetables a month. And the total requirements of frozen vegetables for the Army, Navy and other armed services for 1943 is put at 70.9 million pounds, of which the Army wants 53 million. By commodities the total military demand for frozen vegetables in 1943 is as follows: lima beans, 13,400,000 lb.; snap beans, 8,000,000 lb.; sweet corn, 5,400,000 lb.; peas, 30,700,000 lbs.; and spinach, 13,400,000 lbs. Frozen vegetables other than those listed will be considered by the armed forces if available in sufficient quantities. As to package sizes, the Army prefers 2½- and 5-lb. containers.

AID TO FARMERS ON MARKETING TIMBER. (From Secretary Wickard's memo to USDA War Boards) The war has led to very heavy demands for lumber and other forest products. It has also led to a great increase in the amount of destructive cutting. This demand is increasing the pressure on farmers to sell their timber. I am sure that farmers want their products to contribute to war needs. I am also sure that they want to lead the country in avoiding excessive prices and inflation. But too often the farmers' timber is being purchased on a low estimate of quantity for a lump sum which is far below its real value. Furthermore, in a majority of cases, their forests are then cut destructively and without conscious regard for their future productivity. I have recently allotted $223,000 to the Federal Forest Service from the Norris-Doxey Act appropriation to be used primarily for building up a forest products marketing service in cooperation with appropriate state agencies, or directly. In addition to assistance to farmers in obtaining a reasonable price for their timber, this service will supplement existing facilities for obtaining good cutting practices. In order to meet this price situation and also to minimize destructive cutting, I suggest that through appropriate channels you urge farmers in general when they have forest products to sell, to obtain advice on marketing and methods of cutting either from the state extension foresters, or from state foresters, or from the Federal Forest Service or Soil Conservation Service.

- - - - - - - - - -

WHEAT HYBRID. (Business Week, November 7) After 5 years of experimentation, selective breeding, and field tests, the plant breeding department of Cornell University has achieved a soft, white wheat, expected to supersede Yorkman wheat in the pastry-flour field. As yet unnamed, the new wheat is tagged Hybrid 595. It is claimed for 595 that it has a slightly better yield than Yorkman, that it is winter-resistant, has better straw quality, better loose smut resistance, and that it makes as good or better pastry flour than the present type. In tests covering five years at Ithaca, N. Y., 595 has yielded an average of about 4 bu. per acre better than Yorkman, which had topped anything ever seen before in the soft wheat field with yields of up to 60 and 64 bu. per acre. Some 250 bu. of certified 595 seed were distributed this year to be planted in about 200 acres on certified seed farm. Sown a bushel and a peck per acre, 595 is expected to yield at least 6,000--maybe 8,000--bu. of cleaned seed for unrestricted distribution by the next planting season.

TOBACCO AS FERTILIZER. (Western Tobacco Journal, November 3) Stalks from the present tobacco crop, properly preserved and spread on the land, would be worth $1,000,000 to Kentucky farmers, declares S. C. Jones of the State College of Agriculture and Home Economics. A ton of stalks which have not been exposed to the rain contain as much fertilizer nutrients as five to six tons of manure, according to Jones. Tobacco stalks are rich in nitrogen and potassium and also contain phosphorus and lime. A ton of stalks contain 60 or 65 pounds each of nitrogen and potassium and about six pounds of phosphorus and 30 or 35 pounds of calcium, or the equivalent of about 100 pounds of ground limestone. These nutrients, if purchased in commercial fertilizers, would cost some $12 or $15.

BUTTER FAT SUPERIOR. (Science Service, Oct. 22) Experiments showing for the first time that butter fat, apart from its vitamin content, is superior to vegetable oils for nourishing the young were reported by the University of Wisconsin College of Agriculture. The experiments show also, that "'filled milk' should not be allowed to get into the channels of infant and child nutrition." Even when vitamins A, D and # were added to vegetable oils there was inferior growth of weanling rats fed on them. Not only do the rats on butter fat grow better, but they look better. When kept for reproduction studies, marked superiority in numbers born and reared results. Similar results were obtained from experiments with calves at the University of Minnesota. Butter's superior nourishing quality for the young, Dr. Hart discovered, is due to a saturated fatty acid (or acids) of high molecular weight which is not present, at least in quantity, in the vegetable oils investigated.

CRANBERRY CROP. (Ice and Refrigeration, November) With the cranberry crop of Washington and Oregon coming on for Thanksgiving to challenge Cape Cod itself and rival production of Eastern Massachusetts, new refrigeration and freezing facilities are being prepared to take care of this crop. Prospective production for Washington has been estimated at 40,000 barrels this year as against 36,000 last year, while Oregon is producing about 11,400 barrels of such berries against the 10,200 barrels last year.

The Digest

Prepared by the Press Service for the use of USDA employees. Views and opinions in these items are not necessarily approved by the Department of Agriculture.

Washington, D.C., December 7, 1942

WEEKLY WEATHER (For week ending Dec. 1) Following an extended period of above-normal temperatures, in Central and Northern States east of the Rocky Mountains, there was a reaction during the past week to much colder weather with wintery conditions prevailing much of the time over large areas. Subzero temperatures were reported well into north-central districts, with as low as -9° in some localities as far south as Iowa.

Attending the cold weather, widespread snow occurred in Northern States nearly from ocean to ocean, with the falls ranging up to 10 inches as far south as some localities of northern Illinois and 1 to 2 inches in northwestern Kansas. In northern Rocky Mountain sections snowfall was heavy in some areas, especially in Wyoming, where high elevations now have unusual depths for so early in the season. At the close of the week winter wheat fields had a fairly general cover of snow in northern sections, including the northern portion of the main Winter Wheat Belt. West of the Mississippi River conditions continue unusually favorable in most areas, with wheat fields affording excellent pasturage in the southern Plains. Husking corn that remains ungathered made rather slow progress because of unfavorable weather for outside work, but housing is well along. In Illinois about 80 percent of the crop has been husked, while in Iowa only 10 to 20 percent is still out in the south and east, with picking practically completed elsewhere.

TERMITES 'TACKLING' BOX CARS WILL HAVE A DISTRESSING DIET(Wall Street Journal, Dec. 2) South American termites will suffer from acute indigestion when they tackle the new wooden box cars now being made in this country for a South American government. All lumber used in these 25-ton capacity cars is Douglas fir, treated to protect it against termites and decay. A solution of chemical salts is forced into the wood by pressure; when the wood dries the preservative remains in the form of dry salts.

PLASTIC FROM VEGETABLE FIBERS (Pathfinder, Nov. 28) A new plastic composition which can replace steel or other metals in many uses has been announced jointly by Hercules Powder Co. and The Patent & Licensing Corp. The new plastic is made from vegetable fibers and resin. To make it, resin-treated fiber is turned out in sheets on standard paper-making machinery. The sheets are then hydraulically pressed together to form a composition that is hard, dense, stiff but not brittle. While its possibilities are being explored for use in containers, furniture and various fixtures, the new plastic is already being used by one Chicago company to manufacture three-inch tubing to replace steel pipe in oil field exploration. The pipe is light enough for a man to balance seven 10-foot lengths on his shoulder with ease, yet strong enough to support the weight of three men. The resin used in the plastic is made from Southern pine.

CIGAR-CIGARETTE SALES UP. (Western Tobacco Journal, Nov.3) September output of cigars amounted to 519,975,860 in comparison with 506,070,675 the production during the same month a year earlier, revealing an increase of 13,905,185.

September output of cigarettes reached a total of 21,798,717,220 including both large and small compared with 18,760,756,617 during the same month of September previous year, representing an increase of 3,037,960,603. cigarettes.

VITAMIN SOURCE VARIES. (Florida Grower, November) Some varieties of fruits and vegetables are richer in vitamins than others. Some part of an individual fruit or vegetable may be a better source of a given vitamin than another part. Research by the many scientific workers engaged in vitamin studies shows, for example that the peel of an apple has more vitamin C than the flesh, the rosy or "sunny side" more vitamin C than the "shady side." The vitamin A content of butter varies with the breed of the cow, with what the cow eats, whether she is stall fed or on pasture, and with the length of time after calving when butter is made. Vitamin C values of citrus fruits depend on the variety, time of harvest, even on the location of the tree in the orchard and the fruit on the tree——on an outside or inside branch.

SEED FLOWN TO RUSSIA. (Florida Grower, November) New varieties of disease-resistant seeds, contributed by American agricultural stations, have arrived in Moscow by plane. The American seed varieties are expected to help Russia to maintain her agricultural yield at a level compensating for the loss of nearly a quarter of her sown area. Russia's two leading agricultural scientists, who will study adaptation of the American seeds to Russian conditions, are now devoting all their time to instructing farmers in ways of increasing the yield, according to reports.

Among the pedigreed disease resistant, experimental seed sent from the United States are the familiar grain and vegetables of Russia — wheat, oats, barley, tomatoes, carrots, beets, cucumbers, cabbage and corn -- and a few vegetables hitherto little cultivated there -- spinach, collards, celery, peas, squash and eggplant. Universities and agricultural experimental stations throughout the United States and Canada contributed the new seed varieties.

CATTLE TAIL HAIR. (The Chemurgic Digest, Oct. 31) Cattle tail tips are going to war as hair in army mattresses. Restriction of the sale and delivery of cattle tail hair, except to the armed forces, has been announced by WPB. Because of its springiness and low susceptibility to moisture, the hair is ideal for padding material. In peacetime it was used largely in carpet sweepers and hair brushes, after the cows no longer needed it to swat flies with. Only about eight inches of a cow's tail is used. At Forth Worth, Texas, alone nearly 150 tons of cattle tail hair are marketed yearly.

FROZEN BREAD. (The Locker Operator, Nov. 1942) From Yellowstone National Park comes word of frozen bread -- a most unique use of frozen food service. Here, one of the guides stores 100 loaves of fresh bread in his freezer with winter supplies. The bread is frozen solid, but when placed in the oven for a few minutes, comes out as fresh as a newly-baked loaf. The guide claims the bread tastes even better after being frozen and thawed.

SUGAR FROM SORGHUM. (Science News Letter, Nov. 21,) Sugar from sorghum, fireprocfing, better insecticides and over 50 other inventions have been developed by workers in the U.S.D.A. in the past year.

Most of the devices were developed to increase farm efficiency, but many will have direct importance to everyone in meeting war-time needs. Sugar yield from sorghum comparable with that obtained from sugarcane, for example, will now be possible for the first time. The process was patented by Emil K. Ventre and Howard B. Paine of the Agricultural Research Administration. Establishment of an industry to relieve the sugar shortage will result, it is hoped, from research to develop improved sorghum varieties. Some varieties of high sugar content mature early enough, it is pointed out, so that sugar factories could process the sorghum before the sugarcane harvest, using the same equipment. Attacking the Japs on all fronts includes an improved insecticide for combating the Japanese beetle, a destructive insect in many areas. The new insecticide, developed by Samson R. Dutky of the Agricultural Research Administration, consists of an inert powder mixed with large numbers of germ spores which produce a milky disease fatal to the larvae. A trap for moths of the tobacco and tomato worms, developed by Lincoln B. Scott and Joe Milam of the Bureau of Entomology and Plant Quarantine, is another device for insect control. A method for checking the development of rancidity in oils and fats, a process which increases the resistance of nails to withdrawal from wood, and a chemical preparation for fireproofing fabrics, are covered by other patents. Of the inventions listed by the Department of Agriculture, about half were dedicated to the public and the remainder were assigned to concerns for development, with control retained in the Department.

NO COFFEE CROP EXPECTED. (Science News Letter, Nov. 21) Coffee and tea production in this country or a satisfactory substitute is not in the offing despite recent rosy rumors born of war shortages. Glistening white clusters of bitter crystals are dissolved in every cup of either coffee or tea — caffeine upon which Americans have depended for a physical and mental boost. This stimulating chemical has been found in at least six different families of plants in many parts of the globe. But none can be imported any more easily than coffee; none can be quickly grown here. When you can't get coffee, however, you might be able to brew a cup of tea. Scientists tell us that a strong cup of tea contains about the same amount of caffeine as a cup of coffee and is just as stimulating.

Tests show that caffeine actually causes a quicker, clearer flow of thought and permits more sustained intellectual effort. As its action creeps down the spinal cord, ease of muscular action increases and we are less easily fatigued. Heart muscle is even affected and the beat is speeded. Hitting the vasomotor nerves, caffeine causes the blood vessels to dilate. This, together with the heart action, increases blood flow. Indirectly, this speeds elimination of kidney secretions.

BAMBOO FOR DEFENSE. (The Chemurgic Digest, Oct. 31) Bamboo for the Gulf Coast is attracting attention of federal scientists who have been instructed to study the uses and growing of this important Oriental crop, according to the Chicago Sun. As a source of cellulose, no other plant can produce more per acre per year than certain kinds of bamboo. The oldest Chinese books are written on bamboo paper and their pages are sound today after 3,000 years. The fresh shoots are prized articles of diet in the Orient.

Mature stalks, often five inches thick, are used as bridge timbers, water pipes and for baskets, furniture and entire buildings. Along the Texas and Louisiana Gulf Coast several species of imported and native bamboo thrive.

RUBBER FROM SOYBEANS. (The Chemurgic Digest, Oct. 31) The method of making a rubber-like material from soybeans and other vegetable proteins is disclosed in a recent United States patent issued to Robert Brown, of New York. Mr. Brown claims that his material is even more elastic than natural rubber and has greater strength. In order to produce this new material called rubberoid, the beans are thoroughly ground and the fats and oils removed, leaving only the protein. This meal is then mixed with water and quick-lime, thoroughly stirred and the resultant clear, yellowish, viscous liquid is then filtered. This liquid is treated with chlorine to induce polymerization. If at this stage the liquid is spread over a surface and dried by steam, there is produced a clear soft film which has many of the properties of rubber although it is not highly elastic, according to the patent. To increase the elasticity, carbon disulphide is added, followed by a shorter chlorine treatment and another period of standing.

FOODS KEEP VITAMINS. (Science News Letter, Nov. 28) Many vitamins are found in dehydrated foods if they are properly treated. Fruits dehydrated under the new factory processes retain more vitamins than those preserved by sundrying. While prunes, peaches, and apricots are good sources of vitamin C, only those treated with sulfur dioxide retain this vitamin. On the other hand, the sulfur treatment destroys two thirds of the vitamin B_1, as the thiamin molecule is split by sulfur dioxide. Since peaches and apricots are not rich in B_1, sulfuring is probably desirable in their dehydration. Vitamin A is stable and is retained in both dehydrated and sun-dried fruits, but riboflavin is quickly destroyed by light so that sundried fruit has lost most of its vitamin B_2, while dehydrated fruit shielded from light, retains it.

SUBSTITUTE FOR DIGITALIS FOUND. (Science News Letter, Nov. 28) A crystalline substance from a Balkan digitalis plant, or foxglove, has proved more effective in treating heart disease than the digitalis in common use. The substance is called cedilanid and is found only in Digitalis lanata. Terming it the "first superior substitute for digitalis yet to be found," it produces the same effect as digitalis and acts more rapidly. In many cases, they report, patients were benefited within 10 to 20 minutes after being given cedilanid. It may be given by mouth or by injection into a vein. Their report states that this drug is now on the market and readily available to physicians.

NEW REFRIGERANT. (N.Y. Herald Tribune, Nov. 29) Refrigeration equivalent to the cooling effect produced by the melting of millions of pounds of ice every twenty-four hours is achieved by a compact unit in a new Du Pont synthetic rubber plant, where temperatures of many degrees below zero are required for the manufacture of an essential ingredient.

A relatively small amount of a Du Pont refrigerant in efficient refrigeration and air-conditioning units not only replaces fantastic quantities of ice but, more important, gives the control of heat and humidity, without which much vital war production would be slowed or stopped.

- - - - -